AN INVERSE RESULT FOR THE PERIODIC BOUNDARY CONDITIONS

**ALP ARSLAN KIRAÇ**

Department of Mathematics, Faculty of Arts and Sciences, Pamukkale University, 20070 Denizli, Turkey

Abstract

We obtain the classical Ambarzumyan's theorem for the Sturm-Liouville operator *L* with real-valued potential*q ∈ L1*[0, 1] and periodic boundary conditions when the subset of the spectrum of *L* and Fourier coecients *ck* of the potential *q*such that the condition holds are given. The same result holds for the anti-periodic boundary conditions.

Keywords:

Ambarzumyan theorem, inverse spectral theory, Hill operator, eigenvalue asymptotics